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## Linker Induced Structural Diversity of Coordination Architectures

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**Abstract**:

There has been an upsurge in recent years for the development of new metal-organic frameworks (MOFs) or porous coordination polymers (PCPs) not only because of their applications in areas that includes gas/vapour separation and storage, molecular sieving, sensors, drug delivery, water treatment, heterogeneous catalysis and embedding of nano-particles,[1] but also because of their variety of intriguing architectures and topologies.[2] Much effort has been made in the rational design of these materials as their diverse properties are closely related to the structures which could be modulated by tailoring components via crystal engineering.[3] For our interests to explore and identify the role of ancillary ligands/linkers (the mixed ligand approach), a set of new coordination architectures has been synthesized based on bent dicarboxylates in combination with N-ditopic linkers. These linkers have varied length and functionalities, which direct the structure (1D, 2D or 3D) of the resulting architectures. In this presentation, using one such bent dicarboxylate the influence of various linker geometry on the structure of coordination architectures will be demonstrated.

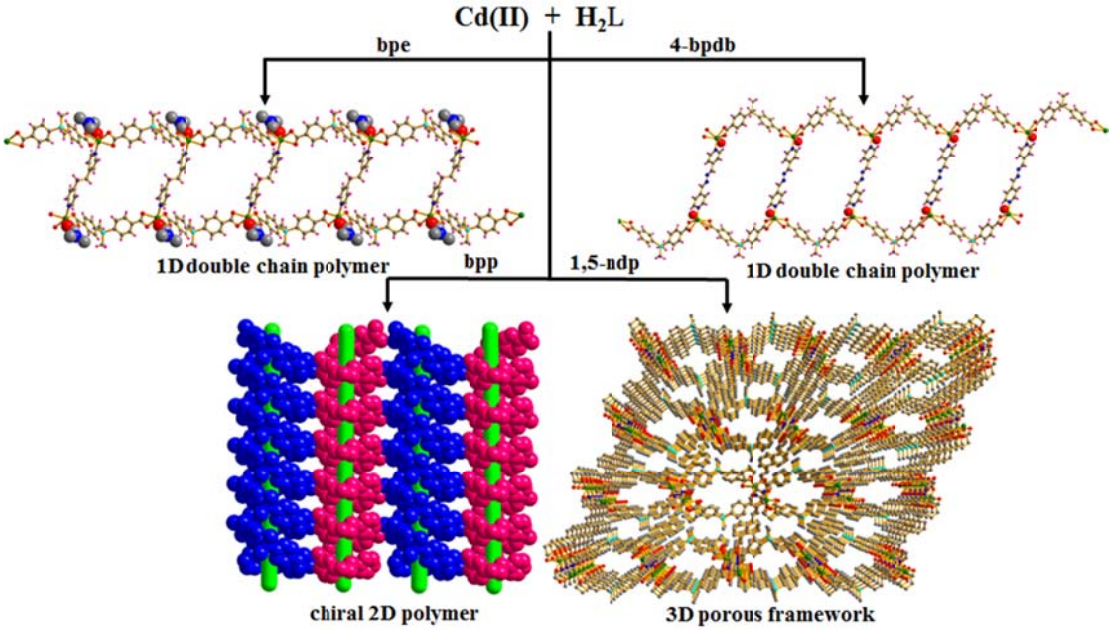


**Figure**. Influence of linker geometry on the structure of the coordination architectures; where, $H_2L$= 4,4'-(dimethylsilanediyl)dibenzoic acid, bpe= 1,2-bis(4-pyridyl)ethane, bpp= 1,3-bis(4-pyridyl)propane, 4-bpdb= 1,4-bis(4-pyridyl)-2,3-diaza-1,3-butadiene and 1,5-ndp= naphthalene-1,5-diaminobis(4-methylpyridine).

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